



INSTRUCTIONAL PACKAGE

RES 236

Cardiopulmonary Diagnostics

Effective Term

Fall 2024/Spring 2025/Summer 2025

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Fall 2024/Spring 2025/Summer 2025

COURSE PREFIX: RES 236

COURSE TITLE: Cardiopulmonary Diagnostics

CONTACT HOURS: 3

CREDIT HOURS: 3

RATIONALE FOR THE COURSE:

RES 236 is a course to help you understand and identify the various diagnostic procedures to diagnose different types of respiratory diseases. Based on the diagnostic procedures and diagnosis students will create a treatment plan. In RES 236, you will choose the appropriate respiratory intervention based on the diagnosis of the patient.

COURSE DESCRIPTION:

This course focuses on the purpose, use, and evaluation of equipment/procedures used in the diagnosis and therapeutic management of patients with cardiopulmonary disease.

PREREQUISITES/CO-REQUISITES:

Respiratory Care Program third semester courses RES 235. Required prerequisite courses must be completed with a grade of "C" or better.

REQUIRED MATERIALS:

1. American Heart Association. (2020) Advanced Cardiac Life Support. ISBN# 9781616697723
[ACLS Precourse Work](#)
2. Cairo, J.M. (2014). Mosby's Respiratory Care Equipment (11th ed). ISBN: 9780323712231
3. Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2017). Egan's Fundamentals of Respiratory Care (12th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323811217
4. Kacmarek, R.M., Stoller, J.K., & Heuer, A.H. (2017). Workbook Egan's Fundamentals of Respiratory Care (12th ed). St. Louis, MO: Elsevier/Mosby. ISBN: 9780323598057

Please visit the [BOOKSTORE](#) online site for most current textbook information.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.
Access to myHGTC portal for student self-services.

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College email access – this is the college’s primary official form of communication.

CLASSROOM ETIQUETTE:

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

PLAGIARISM & CHEATING:

Refer to the College catalog & Student handbook HGTC Handbook. The student may be assigned a failing grade for the course or may be required by the professor to withdraw from the course and/or the respiratory care program. Such actions are deemed to be unprofessional behavior within this program and will not be tolerated.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

1. Demonstrate the ability to identify the ATS Acceptability and Reproducible Criteria for Spirometry, Lung Volumes, DLCO and 6-minute walk test.
2. Evaluate the 3 components of a PFT; Spirometry, Lung Volumes, and DLCO and identify as normal, obstructive, restrictive, or mixed, hyperinflation, air-trapping, and diffusion impairment.
3. Demonstrate the ability to perform 6-minute walk test, ABG machine maintenance, patient nutritional assessment, and basic polysomnography monitoring, and when necessary, recommend corrective action.
4. Analyze arterial blood gases.
5. Interpret arterial blood gases.
6. Implement a plan of care for respiratory compromised patients.
7. Select the proper respiratory interventions to treat patients in mild, moderate, and severe respiratory distress.

Module 1

Material Covered: Pulmonary Function Testing, Interpretation, and Evaluation

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Demonstrate the ability to identify the ATS Acceptability and Reproducible criteria for Spirometry, Lung
2. Volumes, DLCO and 6-minute walk test.
3. Evaluate the 3 components of a PFT; Spirometry, Lung Volumes, and DLCO and identify as normal, obstructive, restrictive, or mixed, hyperinflation, air-trapping and diffusion impairment.
4. Discuss pulmonary function testing principles.

5. Identify the standard pulmonary function testing equipment.
6. Perform standard pulmonary function studies.
7. Interpret standard pulmonary function studies.
8. Evaluate standard pulmonary function studies.

Module 2

Material Covered: Blood Gas Analysis

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Discuss blood gas analysis principles.
2. Identify the standard blood gas analysis equipment.
3. Perform standard blood gas analysis.

Module 3

Material Covered: Sleep Studies

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Demonstrate the ability to perform 6-minute walk test, ABG machine maintenance, patient nutritional assessment, and basic polysomnography monitoring, and when necessary, recommend corrective action.

Module 4

Material Covered: Respiratory Interventions

Assessments:

- Homework/Quizzes
- Paper and Case Study Project
- Exam

Learning Outcomes:

1. Implement a plan of care for respiratory compromised patients.
2. Select the proper respiratory intervention(s) to treat patients in mild, moderate, and severe respiratory distress.

Module 5

Material Covered: ACLS

Assessments:

- Homework/Quizzes
- Paper and Case Study Project

- Exam

Learning Outcomes:

1. Identify cardiac rhythms.
2. List drugs used for ACLS.
3. Recognize clinical applications identified during ACLS

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*:

Students' performance will be assessed, and the weight associated with the various measures/artifacts are listed below.

EVALUATION*

Homework/Quizzes/Projects	15%
Test	60%
Final Exam	25%
	100%

LATE ASSIGNMENTS:

1. All exams are mandatory and must be completed on date of exam. Exams cannot be made up unless for extenuating circumstances or doctors excuse is provided. Any subsequently missed exams will receive a grade of 0.
2. Makeup examinations will be taken in the [testing center](#) on campus, or a location designated by the instructor.
3. A 10 Point overall deduction will be applied to the makeup examination score for missed examinations unless faculty are notified in advance (more than 12 hours), or medical documentation is provided.
4. Final exams cannot be made up. Missing a final exam will result in a failure for the course an "F" will be given (0) zero for the final grade and removal from the program.
5. The discretion of the professor will decide if an absence is excused only under this circumstance will a makeup exam be allowed.

GRADING SYSTEM:

A grade of "C" or better must be achieved in all required respiratory care program courses for a student to progress through the program. A final grade of less than 75 is not passing in the Respiratory Care Program and does not meet the requirements for progression within the program. This policy is different than the Horry Georgetown Technical College Grading Policy.

GRADING SCALE:

100 - 90 = A
 89 - 80 = B
 79 - 75 = C
 74 - 69 = D
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68 - 0 = F

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the [academic calendar](#) for deadlines for add/drop. You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll.

Attendance for Face-to-Face Courses:

For a 15-week course (fall and spring) the allowed number of absences for a M only class is as follows: 2 absences are allowed regardless of reason. After the allowed number of misses, the student will be dropped from the course with a W or a WF.

Missing a lab day whether it is the same day or different day will incur an absence for the same lecture course.

A tardy is given if the student arrives ten minutes after class starts or before class ends. Three tardies are equivalent to one absence for a 15-week course.

Part V: Student Resources



THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

The SSTC offers to all students the following **free** resources:

1. **Academic tutors** for most subject areas, **Writing Center support**, and **college success skills**.
2. Online **tutoring** and academic support resources.

- Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the [Online Resource Center](#) to access on-demand resources.



STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following free resources:

- Getting around HGTC:** General information and guidance for enrollment, financial aid, registration, and payment plan support!
- Use the [Online Resource Center \(ORC\)](#) including Office 365 support, password resets, and username information.
- In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
- Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries are equipped with computers to support academic research and related school work; printing is available as well. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L.
- Test administered in writing on paper.
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

DISABILITY SERVICES:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to HGTC's [Accessibility and Disability Service webpage](#). The Accessibility and Disability Services staff will review documentation of the student's disability and, in a confidential setting with the student, engage in an interactive process to develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided. Students will need to reach out to the Accessibility and Disability Services staff each semester to renew their accommodations.

COUNSELING SERVICES:

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to counseling@hgtc.edu or visit the website the [Counseling Services webpage](#).

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College shall not discriminate in employment or personnel decisions or in student admissions or in student decisions, or in all other segments of the College community on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation, in the educational programs and activities which it operates, and the college is prohibited from discrimination in such manner by applicable laws. Practices and requirements for nondiscrimination extend to the enrollment of students in programs and activities of the College and employment by the College.

All inquiries regarding the federal laws as they relate to discrimination on the basis of sex may be directed to Tamatha Sells, Title IX Coordinator, Horry-Georgetown Technical College, Building 1100C, Room 107B, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5218, tamatha.sells@hgtc.edu or to the US Department of Education Office of Civil Rights. (Telephone: 800-421-3481/Email: OCR@ed.gov).

Other employee and applicant inquiries concerning the federal laws and their application to the College may be directed to Jacquelyne Snyder, Vice President, Human Resources and Employee Relations & the College's Affirmative Action/Equal Opportunity Officer, Horry-Georgetown Technical College, Building 200C, Room 205B, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, jacquelyne.snyder@hgtc.edu.

Other student and prospective student inquiries concerning the federal laws and their application to the College or any student decision may be directed to Dr. Melissa Batten, Vice President, Student Affairs, Section 504 & Title II Coordinator Horry-Georgetown Technical College, Building 1100C, Room 107A, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5228, melissa.batten@hgtc.edu.

TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence, sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement*.

*Faculty and Staff are required to report these incidents to the Title IX Coordinator when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

For more information, contact Tamatha Sells, Title IX Coordinator, Conway Campus, Building 1100C, Room 107B, 843-349-5218, tamatha.sells@hgtc.edu.

PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the [Pregnancy Intake Form](#).